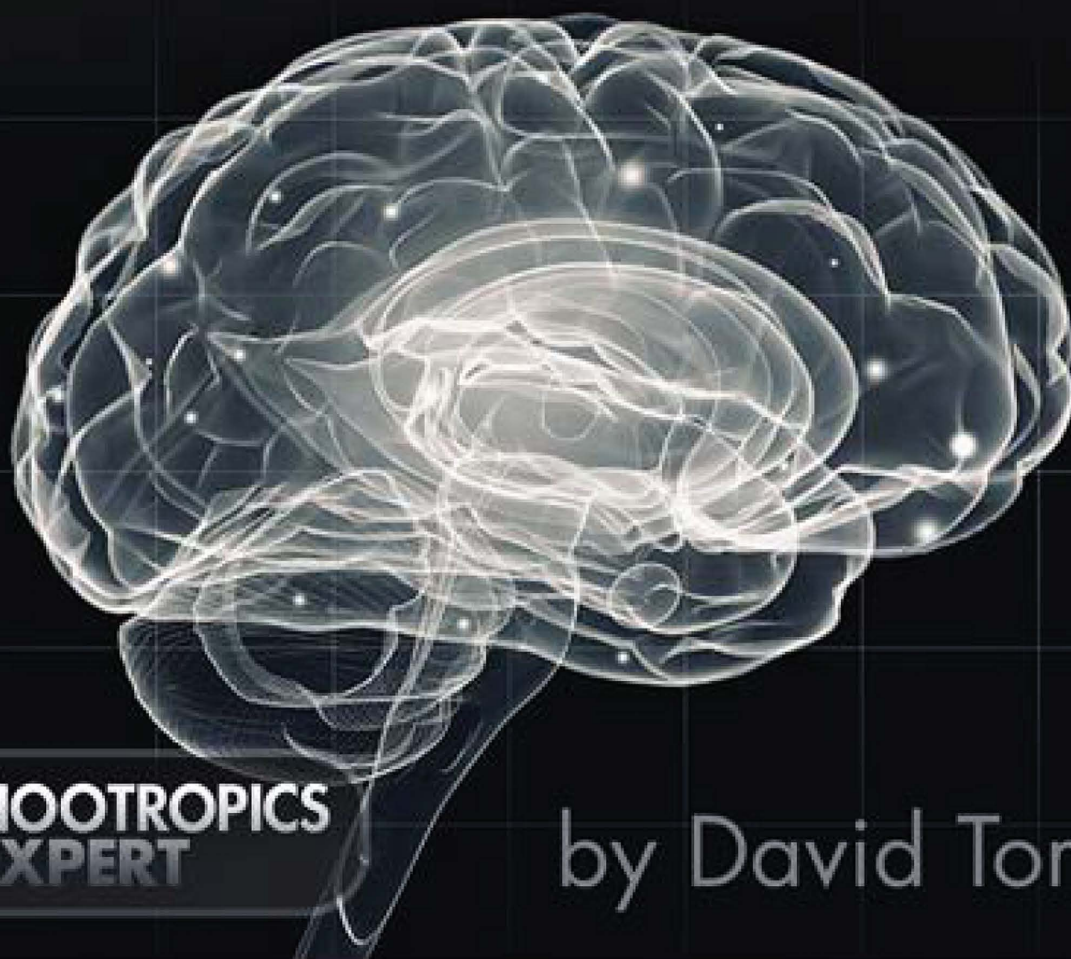


SECRETS OF THE **OPTIMIZED BRAIN**



**NOOTROPICS
EXPERT**

by David Tomen

**81 NOOTROPICS TO UNLOCK
YOUR TRUE BRAIN POTENTIAL**

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Introduction

This is a comprehensive list of the most popular Nootropics in use today. Here you'll learn what the nootropic is, what it does and suggested dosages.

If you are new to the world of Nootropics, you may be wondering the best way to use a particular compound. You'll find that in this guide.

If you are an experienced neurohacker this is a great quick reference guide.

You'll find a brief list of benefits of each Nootropic. Its specific mechanism of action. How safe it is. Suggestions on pairing it with other Nootropics in your stack. And dosage suggestions.

You'll also come across some phrases or words that are live links. Those links will take you to an explanation of that word or phrase in the [Nootropics Glossary](#) on [NootropicsExpert.com](#).

You'll notice that each nootropic listed also ends with a link. If you are reading this guide on your computer, tablet or phone, clicking on the link will take you to a comprehensive article on that nootropic on [NootropicsExpert.com](#).

(Note that you can also go to [NootropicsExpert.com](#) and search for that nootropic. You'll find search results linking you to that page on the website).

Each extended article on [NootropicsExpert.com](#) includes what the nootropic is, and where it comes from. Including a history of that compound. You'll also find information on its mechanism of action in your brain. What goes wrong in your brain and how that nootropic can help fix and often correct the issue.

Each extended article also includes how the nootropic supplement *feels* when you take. Detailed dosage instructions. Side effects, drug interactions, and the different forms available. You'll also have access to tons of scientific research and clinic studies for each nootropic.

If you enjoy this guide, you may to consider getting a copy of my new book – **Head First** – *The Complete Guide to Healing and Optimizing Your Brain with Nootropic Supplements*.

Head First is over 600-pages and *the first authoritative reference guide on nootropics written in the last 20 years*. You can see a full description of what's in *Head First* by clicking here → [Head First](#)

Now a **word of caution** before we get started – always start off with the lowest effective dose of any supplement. Each of our bodies is different so you need to find out the effects of each nootropic in your body. And how it will benefit you.

The list of Nootropics is in alphabetical order. To quickly go to that listing just click on the name in the **Table of Contents** below.

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Acetyl L-Carnitine (ALCAR)

Acetyl L-Carnitine ((*R*)-3-Acetyloxy-4-trimethylammonio-butanoate) is an acetylated form of *L-Carnitine*. A derivative of the amino acid *lysine* which is naturally produced in your liver and kidneys. This synthesized form can easily cross the **blood-brain barrier**.

ALCAR is a nootropic because it targets your brain metabolism, boosts mitochondria energy, and acts as a neuroprotectant. Acetyl L-Carnitine

protects neurotransmitters which makes it a powerful compliment to boost the effectiveness of other nootropics.

Acetyl-L-carnitine boosts memory, mental alertness, fluid thought, and is a strong antioxidant.

The usual suggested dosage for ALCAR is 500 – 1,500 mg per day.



[Learn more about Acetyl-L-Carnitine](#)

Alpha-GPC

Alpha GPC (alpha-glycerylphosphorylcholine) is found naturally in your brain. It is a precursor to **acetylcholine** – an essential neurotransmitter involved in memory, cognition, sleep and muscular control.

As a nootropic, Alpha GPC easily crosses the **blood-brain barrier**. It boosts acetylcholine levels in your brain contributing to improved memory, **cognition**, learning and focus. And protects against age-related memory loss.

You get Alpha GPC from raw beef liver, cod fish, spinach, milk, soy and eggs. As a supplement, Alpha GPC derived from soy or sunflower lecithin is a more efficient way of boosting acetylcholine in your brain.

Recommended daily dosage for Alpha GPC is 600 mg.

[Learn more about Alpha GPC](#)

Alpha-Lipoic Acid (ALA)

Alpha-Lipoic Acid used as a nootropic is a synthetic version of *lipoic acid*. A compound naturally occurring in your body. This antioxidant is necessary for cellular energy production. And helps eliminate the free radicals created when nutrients convert to cellular energy.



ALA boosts energy levels, protects brain cells from free radical damage, and improves memory.

Recommended dosage for Alpha-Lipoic Acid is 200 – 400 mg per day.

[Learn more about Alpha-Lipoic Acid](#)

Aniracetam

Aniracetam (1-(4-methoxybenzoyl)-2-pyrrolidinone) is an N-side chain derivative of **piracetam**. It is thought to be 5 to 8-times more potent than piracetam. Aniracetam is fat-soluble and has a shorter half-life compared to other **racetams**.

A potent nootropic, Aniracetam reduces anxiety and depression with no sedative effects. It seems to do this by activating the D2 and D3 Dopamine receptors in the brain. Aniracetam helps improve memory, learning, **cognition**, along with heightened reflexes and perception.

Dosing aniracetam is 750 – 1,500 mg per day. Do half your daily dose twice per day.

[Learn more about Aniracetam](#)

Ashwagandha

Ashwagandha has been used in **Ayurvedic** medicine for several thousand years. In Sanskrit it literally means “the smell of a horse” which implies this herb provides the vigor and strength of a stallion.



As a nootropic, Ashwagandha helps relieve stress, fatigue, restore energy and boosts concentration. As an **adaptogen**, it helps your entire body by normalizing blood sugar, boosts insulin sensitivity, works as an antioxidant, promotes breast, lung and colon health, and protects against inflammation.

The typical recommended dose of Ashwagandha is 600 – 1,000 mg twice daily.

[Learn more about Ashwagandha](#)

Artichoke Extract (Luteolin)

Artichoke Extract is a *PDE4* inhibitor. *PDE4* is an enzyme that breaks down **cAMP** molecules (messenger systems that relay signals in the brain). Stopping *PDE4* then prevents the breakdown of cAMP.

The nootropic benefits of Artichoke Extract are improved **cognition**, memory, wakefulness, and protecting **neurotransmitters** in your brain.



Artichoke Extract is even more powerful when combined with **Forskolin** to significantly boost cAMP (brain signaling) levels.

Best nootropic artichoke extract dosage with 5% cynarin is 500 mg.

[Learn more about Artichoke Extract](#)

Bacopa Monnieri

Many consider **Bacopa Monnieri** to be *the best nootropic* available today. The nootropic benefit of *Bacopa Monnieri* were first revealed in ancient Ayurvedic texts. In **Ayurveda** its used to help memorize long passages of text. And enhance cognition.

The ancient Hindis liked it so much they named it “Brahmi”, after the supreme god Brahma.

Bacopa Monnieri is an **adaptogen**. It helps prevent the chemical and physical effects of stress. Instead of just suppressing them like many modern antidepressants.

Bacopa Monnieri is used to reduce anxiety, depression, and stress. It'll boost memory, concentration and reaction time. And is used for neuroprotection, and to balance **neurotransmitters**.



The compound Bacoside A easily crosses the [blood-brain barrier](#). And binds to receptor sites to increase [cognition](#) and memory. It has been shown effective in treating ADHD.

Dosage recommendations for Bacopa Monnieri with 45% bacosides is 450 mg.

[Learn more about Bacopa Monnieri](#)

Berberine

Berberine is a bright yellow alkaloid extracted from plants such as Indian Barberry (tree turmeric), Oregon Grape and goldenseal.

Plants containing Berberine have been used in traditional [Ayurvedic](#) and Chinese medicine as an antibacterial, anti-inflammatory, anti-diarrheal, anti-microbial, anti-protozoal and immune-enhancing therapy for thousands of years.

Berberine is one of the very few nootropic supplements known to activate [AMPK](#) (another is [Resveratrol](#)).

Activating AMPK is especially relevant if you're diabetic, pre-diabetic, or over-weight. All conditions that negatively affect [cognition](#). Research and clinical experience has shown Berberine to be as effective in controlling diabetes as the prescription drug metformin.

Berberine is one of the most powerful (literally) nootropic supplements on our [List of Nootropics](#). Not only can Berberine help control diabetes, but you may find sugar cravings disappear. No crashes late afternoon. Energy levels and stamina increase.

Adding Berberine to your [nootropic stack](#) can help improve cholesterol levels, lower blood pressure, [improve your mood](#), [protect your brain from damage](#), and [help memory](#).

Dosing Berberine as a nootropic is 500 mg 3-times per day. *If you are dealing with a medical condition, or are taking any medication (including antibiotics), you should speak with your doctor before taking Berberine.* Especially if you're currently using blood-sugar lowering medication.

[Learn more about Berberine](#)

Cat's Claw

Cat's Claw is a South American vine used as a **nootropic** with potent anti-inflammatory and antioxidant effects that support DNA repair, immune function and normal cell division.



For cognitive health, *Cat's Claw* (*Uncaria tomentosa*) has been used to prevent inflammation, promote **cerebral circulation**, fight **amyloid plaques** in Alzheimer's and possibly even boost **acetylcholine (ACh)**.

The recommended daily dose for Cat's Claw extract (*Uncaria tomentosa*) supplementation is 250 to 350 mg daily.

[Learn more about Cat's Claw](#)

CBD Oil

Cannabidiol (CBD) is extracted from the *Cannabis Sativa L.* plant constituting around 40% of the plant's active compounds.



CBD does not have the same psychotomimetic (mind-altering) effects as the main plant compound *THC* (Δ^9 -tetrahydrocannabinol). In fact, CBD is able to counter the mind-altering effects caused by THC.

CBD Oil is used as a nootropic for its *antianxiety* and *antidepressant* effects, helps *alleviate pain*, reduces *oxidative stress* and *inflammation* and is *anti-tumor*.

Research into CBD has rapidly gained traction in the last few years. And shows potential in the treatment of depression, neuroinflammation, epilepsy, oxidative stress, vomiting and nausea, anxiety, schizophrenia and other neurodegenerative problems.

Note that *CBD Oil* and *hemp oil* are not the same and should not be confused. You will not experience the same *nootropic* benefits with hemp oil as you will with CBD Oil.

Recommended starting dosage of CBD is 4 – 45 mg per day. Dosage of CBD Oil depends on the condition you are treating, your body weight, and how your body reacts to Cannabidiol. Dosages differ from one person to the next.

[Learn more about CBD Oil](#)

Choline

Choline is an essential nutrient needed by your body. And cannot make it on its own. Choline is arguably the most basic of nootropics.

It is a water soluble nutrient required for the health of cell membranes. Choline is also the precursor to the

neurotransmitter **acetylcholine**. In other words, it's the step before producing acetylcholine in your brain.

Food sources of choline are egg yolks, liver, milk and other dairy products, certain grains like quinoa and amaranth, bacon, edamame and cruciferous vegetables.

Brain health is compromised by too little choline. And with our modern diet it is nearly impossible to get enough choline without supplementation.

Common signs of choline deficiency can include; headaches, fatigue, memory problems, and muscle pain.

The way your body uses different sources of choline varies depending on the source, and mechanism of action. Common choline sources used as nootropics are explained next.

Choline Bitartrate

Choline Bitartrate is a "choline salt", and one of the least costly sources of **choline** as a nootropic supplement. It's a weaker source of choline than **Alpha GPC** and **CDP-Choline**. Meaning you need to use more to achieve similar nootropic effects.

Dosing for choline bitartrate ranges from 500 mg – 5 grams daily.

[Learn more about Choline Bitartrate](#)

Choline Citrate

Like other sources of **choline**, **choline citrate** acts as a **precursor** to **acetylcholine** in the brain. This is a slightly more

concentrated form of choline. It's a combination of choline and a derivative of citric acid.

Choline Citrate is effective as a nootropic when use in large enough doses. It assists in boosting **memory** and **recall**, **cognitive abilities**, helps **concentration** and even used to treat brain diseases such as Alzheimer's.

Athletes like choline citrate for its ability to assist in cellular and muscle health and repair.

Choline citrate is available in powder, capsule or pill form. And you'll find it as a main ingredient in many pre-formulated **nootropic stacks**. Since its water soluble you can take it with water, or mixed with your favorite juice.



Dosage can be from 500 mg to 3 grams per day.

[Learn more about Choline Citrate](#)

Citicoline (see **CDP-Choline**)

CDP-Choline

CDP-Choline (Cytidine Diphosphate Choline) is also known as **Citicoline**. CDP-choline is a highly bioavailable source of choline that easily crosses the **blood-brain barrier**.

CDP-Choline is metabolized in the body to form choline and cytidine.ⁱ In the body, choline aids in the synthesis of **acetylcholine**. Acetylcholine is a neurotransmitter associated with memory and learning.

The *cytidine* in CDP-Choline converts to *uridine* in the body. This nucleotide is important to neural membrane synthesis which helps **cognition** or thinking.

CDP-Choline is an effective nootropic on its own. And works synergistically to boost the effectiveness of other nootropics. Particularly those in the **racetam family**.

Dosing of CDP-Choline is 250 – 750 mg per day.

[Learn more about CDP-Choline](#)

Centrophenoxine

Centrophenoxine is a water-soluble derivative of **DMAE**. It is a precursor to **acetylcholine** in the brain. And once metabolized by your liver, it readily crosses the **blood-brain barrier**.



DMAE is a natural chemical found in your body. It works on boosting **cognition** and mood. Centrophenoxine seems to be more effective than DMAE when used as a supplement.

Marketed in Europe as “Lucidril”, its prescribed to treat Alzheimer’s and **ADHD**.

Centrophenoxine is an excellent source of *acetylcholine*. You can boost the effectiveness of certain nootropics like **Piracetam** when combined with Centrophenoxine.

A dosage range of 500 – 1000 mg is considered safe.

[Learn more about Centrophenoxine](#)

Coconut & MCT Oil

Coconut oil is extracted from the seed or fruit of the *coconut palm* (*Cocos nucifera*). Virgin coconut oil is a potent *antioxidant*, *anti-tumor*, *anti-bacterial*, *anti-viral*, and *anti-fungal*.

Coconut oil is 90% saturated fat. Nearly 60% of the fats are *medium-chain fatty acids*. Including caprylic acid C-8 (8%), capric acid, C-10 (7%), and lauric acid C-12 (49%).

Medium-chain fatty acids are also known as **medium-chain triglycerides (MCTs)**. MCTs are produced by hydrolyzing coconut oil and esterifying the fatty acids shorter than lauric acid (C-12) with glycerol.



Both coconut and MCT oil provide some powerful nootropic properties. The MCTs in coconut oil bypass your normal digestive system and go directly to your liver where they are converted to **ketones**.

Ketones are carried throughout your body including your brain for use in the *citric acid cycle* to produce *Adenosine Triphosphate (ATP)*. ATP fuels your mitochondria which improves alertness, *cognition*, *memory* and mood.

MCTs help increase antioxidant levels in your brain. And increase serotonin which provides an anti-stress effect.

And coconut oil decreases mitochondrial dysfunction that can be caused by *Amyloid- β plaques* which are implicated in Alzheimer's disease. And drug-resistant *epilepsy* patients have found that the ketones provided by coconut oil can help reduce seizure frequency.

Coconut & MCT oil are a helpful addition to any nootropic stack which contains fat-soluble supplements. Improving the bioavailability of those nootropics by delivering them directly into brain cells.

Recommended dosage of Coconut & MCT oil is 1 tablespoon 3-times per day. Or each time you take your nootropic dose.

[Learn more about Coconut & MCT Oil](#)

Coluracetam

One of the newer **racetams** on the market, **coluracetam** works as a **choline** uptake enhancer.

As a nootropic, *coluracetam* enhances concentration and **cognition**, boosts memory, mood and focus, and treats anxiety disorders. It also seems to have a stimulant effect which improves motivation. Users also report richer and fuller sound and colors.

General dosage is 20 – 80 mg per day, but depends on your reason for using coluracetam. And your past experience in using racetams.

You may want start with a lower dose, and increase over time based on your experience with this nootropic.

[Learn more about Coluracetam](#)



CoQ10 & Ubiquinol

Coenzyme Q10 is naturally obtained from food such as beef, liver, sardines, mackerel, butter, and extra virgin olive oil. In an ideal world our bodies would convert enough CoQ10 to *Ubiquinol* from our food.

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But a more convenient way is giving our bodies CoQ10 directly by using Ubiquinol as a supplement. No conversion necessary.

The original supplement form of CoQ10 was *Ubiquinone*. It was updated with a newer synthesis of CoQ10 called *Ubiquinol* which *boosts bioavailability from 40% to 90%*.

CoQ10 is essential to fueling the mitochondria in our cells by producing **Adenosine Triphosphate (ATP)**. The Ubiquinol version of CoQ10 is highly bioavailable and easily crosses the **blood-brain barrier**. As a Nootropic, CoQ10 not only fuels ATP in brain cells, but **protects against free radical damage** as well.ⁱⁱ

CoQ10 improves athletic performance, works as an antioxidant, and battles fatigue and depression.

A daily dose of CoQ10 of 100 mg from a highly available form like *Ubiquinol* is best.

[Learn more about CoQ10 & Ubiquinol](#)

Creatine

Creatine is made in the liver, and acts as fuel cells for your cells. Including brain cells. It provides energy on demand. You could say *creatine* is the ultimate nootropic.



Creatine is a popular supplement for athletes because it boosts physical performance by going directly to the muscles needing fuel. Vegetarians and vegans typically have lower levels of creatine in the body than meat eaters.

Creatine is also favored by nootropic users because of the fuel demanded by brain cells when using **racetams**. After crossing the **blood-brain barrier**, creatine binds to *phosphate*. Creatine phosphate in turn fuels energy consumption by the brain.

So creatine is good for muscle fuel, and mental performance. It helps boost memory, reducing brain fatigue, improve mood, is anti-aging and a neuroprotectant.

Dosage recommendation vary widely based on personal preference and physical demand. It goes from 200 mg to 25 grams daily. As a nootropic the most common creatine dosage is 3 – 5 grams per day.

[Learn more about Creatine](#)

DHA (Omega 3)

Your brain is 60% fat. So it would be safe to say that to maintain and excel mentally, our brain needs a good supply of healthy fats.



The two most studied *omega-3* fatty acids are *eicosapentaenoic acid* (EPA) and ***docosahexaenoic acid* (DHA)**. DHA makes up a large portion of brain **gray matter**. Brain fat forms cell membranes. And plays a vital role in how our cells function.

Neurons are also rich in omega-3 fatty acids. DHA is a main component of brain **synapses**. (A synapse is the part of a brain cell that causes a neuron to pass an electrical signal to another neuron).

Low levels of omega-3 fatty acids result in ADD, anxiety, depression, obesity, suicide, and an increased risk of Alzheimer's disease and dementia.

Diets rich in omega-3's help balance emotions and boost mood because DHA is a main component of the brain's **synapses**.

Eating fish helps **cognitive performance** because fish, krill, and other marine life are high in Omega-3's. Other foods high in Omega-3 fatty acids include: anchovies, broccoli, Brussel sprouts, cabbage, cauliflower, flaxseed, soybeans, walnuts, spinach, and tofu.

Ideal daily dosage for Omega-3's should include a least 1,000 mg of DHA.

[Learn more about DHA](#)

DHEA

DHEA (Dehydroepiandrosterone) is a hormone produced by your adrenal glands, brain, and testes in men. *DHEA* levels decline with age right along with *testosterone*. The result is decreased motivation, cognition, depression, fatigue, and loss of libido.

DHEA as a nootropic has a noticeable effect on increasing motivation, and a general sense of well-being.

Remember that *DHEA is a steroid hormone*, and does increase **estrogen**. In men, prolonged



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elevated estrogen levels has negative effects like abdominal fat, and male breasts.

Dosing DHEA is 25 mg per day, and you may want to **cycle** one month on and one month off. But please get your estradiol & DHEA levels checked.

[Learn more about DHEA](#)

DMAE

DMAE (Dimethylaminoethanol) naturally occurs in the brain. DMAE *is not* a precursor to **acetylcholine** as reported on some other nootropic sites. DMAE prevents choline metabolism by cells and boosting choline levels in the brain as a result.



DMAE as a nootropic helps increase alertness, boosts mood and memory. Studies show that DMAE supplementation may help improve mood.ⁱⁱⁱ

Use of DMAE as a nootropic has mixed reviews in the neurohacking community. Some report benefits to increased energy. And others say it causes *hyperactivity*, loss of focus and motivation, and depression. Most of the negative effects of DMAE come from higher and prolonged dosing.

Like all nootropics, and particularly with DMAE, experiment to find out *if* it's right for you. Start out with a smaller 50 mg dose, and go as high as 200 mg. per day looking for your sweet spot. And check out the "Dosage Notes" and "Side Effects" in the extended article (click the link directly below) for more on DMAE.

[Learn more about DMAE](#)

5-HTP

5-HTP (5-Hydroxytryptophan) is a **serotonin precursor** in the brain. It is a naturally occurring byproduct of the amino acid **tryptophan**. Serotonin is a **neurotransmitter** that helps communication between **neurons**.

5-HTP as a nootropic easily crosses the **blood-brain barrier**. And once it converts to serotonin can help improve mood, control behavior and appetite, and help you sleep.

Research shows 5-HTP can help in impulse control, and balance out moods resulting in less anxiety.^{iv} And even reduce panic attacks.

Dosing of 5-HTP is 50 mg 3-times per day for *up to 2 weeks*.

See the extended article for **Nootropics Expert** recommendations and warnings on supplementing with 5-HTP.

[Learn more about 5-HTP](#)

Forskolin (Coleus root)

Forskolin is a plant native to south Asia. And has a limited nootropic track record. It first became popular when included in the open source stack *CILTEP*.

Forskolin combined with **artichoke extract** boosts **cAMP levels** in the brain. Leading to improved memory, and ability to reason.

Common dosage of Forskolin is 150 – 250 mg. per day.

[Learn more about Forskolin](#)



GABA

GABA (gamma aminobutyric acid) is an amino acid and **neurotransmitter** produced by **glutamate** in your brain. GABA in the brain is considered an inhibitory neurotransmitter which means it prevents other neurotransmitters from being released. Resulting in an anti-anxiety and calming effect.

GABA as a supplement makes a poor nootropic because it *cannot cross the blood-brain barrier*. So I do not advise using a pure GABA supplement as a nootropic.

Adding a *phenyl group* to GABA (called **Phenibut** (β -Phenyl-GABA)), this derivative is able to enter your brain to lower levels of anxiety and stress.

Typical recommended dosage of Phenibut is 250 mg per day.

[Learn more about GABA](#)

Ginkgo Biloba



Ginkgo Biloba comes from the leaves of the Ginkgo tree native to China. The leaves have been used for thousands of years to boost mental alertness, improve **cerebral circulation**, and the overall function of the brain.

As a nootropic, **Ginkgo** has been shown to be particularly effective in elderly memory loss, slow thinking and reasoning, and tinnitus. One study shows significant improvement in Parkinson's and Alzheimer patients.^v

Most noticeable in adults suffering **cognitive decline**, Ginkgo Biloba seems to improve short term memory and recall. It's also effective in reducing stress and anxiety, and boosting mood.

Dosage of Ginkgo Biloba is typically 120 – 240 mg per day with food. Caution should be taken because Ginkgo can increase internal bleeding in some users (see *Side Effects* in the extended article on NootropicsExpert.com by clicking the link below).

[Learn more about Ginkgo Biloba](#)

Ginseng

Ginseng can improve symptoms of anxiety, and boost attention, concentration, and memory. Nootropic users above 40 find the most benefit in *Ginseng*.

Panax ginseng is native to southeast Asia. Other species include **American Ginseng** and *Siberian Ginseng*. Each have unique characteristics. *Panax Ginseng* is preferred as a nootropic, and is used as a memory booster, improves mood, lower anxiety levels, and boosts stamina and endurance.



Look for ginseng extract of at least 3-5% ginsenosides. A good starting dose is 100 mg per day.

[Learn more about Ginseng](#)

Gotu Kola

Gotu Kola (*Centella asiatica*) is one of the most important herbs in ancient **Ayurveda** medicine. Ayurveda uses it to reduce anxiety, reduce fever and treat skin conditions. It improves circulation and promotes longevity.



Unfortunately, our brains also shrink as we age. **Brain growth factor** seems to diminish. But clinical trials show gotu kola extract can help spur growth in brain cells.^{vi}

Users report gotu kola is at least as effective – perhaps even more so – in reducing anxiety and relieving stress than **Ashwagandha** and **Phenibut**.

As an extract dosage is 10 drops or 10-20 ml per day. As a dried herb make a tea of the dried leaf and use 3-times daily. As a powdered herb take 400-600 mg, three times per day.

[Learn more about Gotu Kola](#)

Huperzine-A

Huperzine-A is a natural compound extracted from the Chinese club moss *huperzia serrata*. Huperzine-A is an *acetylcholinesterase* inhibitor which means it boosts levels of the neurotransmitter **acetylcholine** in your brain.

Huperzine-A helps promote memory by increasing acetylcholine levels. Users report improved memory, retention, **cognition**, and lucid dreaming.

Dosage of Huperzine-A is 200 mcg per day.

[Learn more about Huperzine-A](#)

Iodine

Iodine is a **cognitive enhancer** not talked about much in the nootropic community. Iodine deficient populations are up to 13.5 IQ points less than normal populations.^{vii}

Since iodine has largely been removed from table salt in some countries, many suggest an iodine deficiency epidemic. Particularly in countries like the United States.



Iodine is essential to a healthy thyroid. Remember, your thyroid is right next to your brain. Iodine deficiency during early childhood results in profound intellectual disability.

The thyroid hormones T_4 and T_3 are synthesized from iodine and **tyrosine**. These help regulate processes like growth and metabolism. Thyroid hormones target organs like the brain where they regulate gene expression. And help protect brain cells from toxins.

Ask anyone suffering from hypothyroidism about brain fog!

Dosage for a healthy adult is 25 – 50 mg per day. Supplemented with selenium. Brazil nuts are a great source of natural iodine. One Brazil nut can give you your daily dose.

[Learn more about Iodine](#)

Kava Kava

Kava (piper methysticum) is native to the South Pacific. Pacific Islanders traditionally use the plant for its sedative effects.

Kava can help to reduce anxiety, improve mood, and promote an overall sense of well-being. And unlike **benzodiazepines**, kava does not impair cognitive function. In fact, studies show kava may boost **cognitive function**.^{viii}

Of the 105 varieties of kava, *Noble* and *Tudei Kava* has been traditionally used in the South Pacific Islands. And has been safely consumed for hundreds of years.

Daily dosage of Kava Kava is 250 – 500 mg. Some experts suggest taking less as it will have less impact on your liver. Experiment to find out what works for you.

[Learn more about Kava](#)

Lion's Mane

Lion's Mane Mushroom is an ancient Chinese remedy for improving [cognitive performance](#), and overall health.



Unlike other nootropics which often modulate [neurotransmitters](#), Lion's Mane goes to the root of the problem. It prevents and treats nerve damage by boosting *Brain Nerve Growth Factor*, or [neurogenesis](#).

Lion's Mane can help improve focus and attention, boost thinking, repair brain cells, help depression and anxiety, and manage other neurological problems like Alzheimer's, dementia, Parkinson's and muscular dystrophy.

Lion's Mane Mushroom dosage largely depends on the strength of the extract. And amount of polysaccharide content. Try 500 mg to 3 gm per day depending on extract concentration.

[Learn more about Lion's Mane](#)

L- Carnosine

L- Carnosine is an amino acid or **dipeptide** found in your kidneys, liver, muscles and brain. The two amino acids are beta-alanine and L-histidine.



L-Carnosine works in the body as an antioxidant scavenging for free radicals. The concentration in muscles correlates with life span so it's considered a powerful anti-aging supplement.

L-Carnosine is involved in **neurotransmission**, binds to and helps remove AGEs (Advance Glycosylation End-products), helps in the treatment of Alzheimer's, and assists in removing heavy metal toxins.

While you may not see profound and immediate nootropic benefits using L-Carnosine, hundreds of studies prove its benefits for long-term health and anti-aging.

Recommended dosage of L-Carnosine is 1,000 mg per day. Bodybuilders and athletes prefer supplementing with beta-alanine – up to 3.2 grams per day. (Do not confuse **L-Carnosine** with **L-Carnitine**).

[Learn more about L-Carnosine](#)

L-Dopa (Mucuna Pruriens)

L-Dopa (L-3,4-dihydroxyphenylalanine) is a precursor to the formation of **dopamine**, **norepinephrine**, and **epinephrine** in your brain. In your body, **L-dopa** is synthesized from the amino acid **L-tyrosine**.

Dopamine deficiency is directly correlated with Parkinson's Disease.

L-dopa easily crosses the **blood-brain barrier** when used as a nootropic supplement. L-dopa can increase libido, testosterone, enhances memory and learning retention. It is also reported to increase human growth hormone (HGH) levels.^{ix}

You can easily get extracts of Mucuna pruriens of up to 98% pure L-Dopa taken from velvet bean or cowitch. Dosage depends on the strength of the extract and can range from 150 mg to 1 gm per day.

[Learn more about L-DOPA \(Mucuna Pruriens\)](#)

Lemon Balm

Lemon Balm (*Melissa officinalis*) is used for its anti-anxiety effects. This plant from the mint family has a lemony scent, and is native to the Mediterranean region.

Rosmarinic acid, a compound found in *lemon balm*, inhibits the *GABA transaminase* enzyme. Which in turn helps maintain adequate levels of **GABA** in your brain. Resulting in a calming effect.



As a nootropic, lemon balm is most commonly used for stress relief, and reduction of panic attacks. Lemon balm also helps with focus,

concentration, reduces irritability and depression, and improves memory and learning retention.

Dosage of *lemon balm* is 1 – 2 grams of dried lemon balm leaf as a tea, or 300 – 600 mg of lemon balm *extract* as a nootropic supplement.

[Learn more about Lemon Balm](#)

L-Glutamine

As a nootropic, **L-glutamine** increases the effectiveness and activity of **neurotransmitters**. Helping with improve focus, energy, **cognition** and retention when learning.

L-glutamine in your brain works by boosting *glutamic acid* and *gamma-aminobutyric acid (GABA)*. It also helps detox toxins and free radicals from your brain.



And by increasing GABA levels, L-glutamine can lead to reduced stress and better sleep.

Dosage of L-glutamine varies from 500 mg all the way to 10 or 20 grams. For nootropic use it's typically on the lower end of the scale. Experiment with smaller amounts, and move up as needed to see what works best for you.

[Learn more about L-Glutamine](#)

Lithium Orotate

Lithium retains a grim and undeserved reputation. Because it has been associated with treating serious mental issues like bipolar disorder and mania.

It turns out that the psychotic medication *lithium* isn't even a drug. It's actually an essential trace mineral required to maintain optimal cognitive function.



Studies from around the world have demonstrated the critical health benefits of lithium. One study using data from 27 Texas counties from 1978 – 1987 found that *rates of suicide, homicide and rape were significantly higher in counties whose drinking water contained little or no lithium.*

As a nootropic, micro-dosing with *Lithium Orotate* comes with a host of benefits. Lithium calms mania and mood swings by decreasing the sensitivity of norepinephrine receptors. It upregulates *brain-derived neurotrophic factor (BDNF)*, *nerve growth factor (NGF)*, *neurotrophin-3 (NT3)* and their receptors.

And lithium stimulates the proliferation of *stem cells* in the brain. All boosting *neurogenesis* and assisting in repair from all types of brain injury.

Lithium also increases brain *gray matter*, increases *DNA* replication for *neurogenesis*, prevents *apoptosis*, increases *N-acetyl-aspartate (NAA)*, inhibits *beta-amyloid* secretion and protects against damage once it's formed, chelates aluminum, and protects against *glutamate* toxicity.

Lithium Orotate recommended dose is 5 mg two or three times per day.

[Learn more about Lithium Orotate](#)

L-Theanine

L-Theanine, which naturally occurs in green tea and oolong tea, is an amino acid. **L-Theanine** is used as a nootropic for anxiety, learning, mood, and focus.

Since it easily crosses the **blood-brain barrier**, L-Theanine works quickly to increase **dopamine** and **serotonin**. The “feel good” neurotransmitters in your brain.

Experienced nootropic users often **stack** L-Theanine with caffeine for a synergistic effect to promote **cognition**, motivation and attention. As a bonus, the caffeine jitters are reduced when combined with L-Theanine.



Dosing L-Theanine as a nootropic is 250 – 500 mg and it is water soluble.

[Learn more about L-Theanine](#)

Magnesium

Magnesium doesn't get the respect it should as a nootropic. The lack of adequate levels of magnesium in your body can result in *brain fog*, *anxiety* and *depression*.

Magnesium deficiency is nearly epidemic in our society because it is sorely lacking in our food supply.^{x xi}

Plasticity of neuron **synapses** is affected by the presence of adequate magnesium in brain cells. It helps improve memory and **cognition**. And reduces anxiety, brain fog and depression.

Magnesium can also help maintain healthy blood pressure, and help prevent sudden heart attack and stroke.

Most forms of Magnesium don't work well as a nootropic supplement because they can't easily cross the blood-brain barrier.

A new form of magnesium called **Magnesium-L-threonate** is recommended for nootropic use. And is a great addition to any nootropic stack.

A typical adult dosage of *magnesium-L-threonate* is 1 gram per day.

[Learn more about Magnesium](#)



Methylene Blue

Methylene Blue as a nootropic will likely *feel* different than any other nootropic on this list. It's the first *synthetic* drug ever developed. First used to treat malaria back in 1891.

Methylene Blue assists *brain cell respiration* by increasing intracellular oxygen. It donates electrons to the *electron transport chain* within **mitochondria** which helps create the **ATP** needed to fuel mitochondria.

Methylene Blue is a potent *antioxidant*. It binds to *superoxide* created during metabolism within brain cells. Reducing it to water and stopping the oxidative cascade at its very beginning. *Before it gets a chance to do damage.*



And Methylene Blue inhibits **monoamine oxidase (MAOI)** and **acetylcholinesterase** activity which increases levels of **catecholamines** and **acetylcholine**. Boosting **serotonin** and **norepinephrine** levels. Affecting anxiety, depression, energy and **memory**.

Recommended safe dosage based on clinical studies ranges from 0.5 – 4 mg/kg of body weight. It's water-soluble so you don't have to take it with a meal or healthy fat.

But please see the "**Side Effects**" section in the main Methylene Blue review. Because you don't want to take it with antidepressant or anti-anxiety medications. Or you put yourself at risk of **Serotonin Syndrome**.

[Learn more about Methylene Blue](#)

Melatonin

A good night's sleep is about the nearest we can get to the perfect **nootropic**. **Melatonin (N-Acetyl-5-Methoxytryptamine)** is a hormone made in your pineal gland. And it's this hormone your body produces when it's time to go to sleep.

Melatonin levels are low during the day. And peak at about 2 – 3 AM depending on your age. After that it steadily declines until morning.

When the timing is off and melatonin drops below optimal levels, you know you're getting old(er). Or your pineal gland is not working optimally.

When the melatonin cycle is disrupted by jet-lag, aging or stress – your ability to think clearly, memory, and decision-making abilities can suffer.



Don't take melatonin during the day or it will disrupt your natural **circadian rhythm**. Melatonin as a nootropic supplement taken 1 1/2 hours before bed is ideal.

The appropriate dose of melatonin can vary widely from person to person. Start with 1 – 3 mg, 90 minutes before bedtime. See how you feel. And if you readily fall and stay asleep until morning.

Then adjust your dose from there – up or down. Most people don't need any more than 3 – 5 mg per night.

[Learn more about Melatonin](#)

N-Acetyl L-Cysteine

N-Acetyl L-Cysteine (NAC) is an amino acid that regulates the amount of **glutamate** and **dopamine** in your brain. NAC is the precursor to glutathione which reduces free radicals in your brain.

N-Acetyl L-Cysteine is used as an anti-dote to Tylenol (acetaminophen) overdose and carbon monoxide poisoning.

NAC is also used to treat **ADHD**, Bipolar Disorder, prevent alcoholic liver damage, Alzheimer's Disease, eliminate heavy metals, and depression.

Dosing N-Acetyl L-Cysteine as a nootropic at 600 mg up to three times per day helps with focus, motivation and concentration.

[Learn more about N-Acetyl L-Cysteine](#)

N-Acetyl L-Tyrosine

N-Acetyl L-Tyrosine (NALT) is a highly bio-available form of the amino acid **L-Tyrosine**. The brain uses L-Tyrosine to produce **dopamine**. And the neurotransmitter **norepinephrine** which is your "fight or flight" hormone.

Dopamine is involved with libido, memory, focus, goal-oriented concentration, is a mood elevator and anti-depressant.



Norepinephrine helps with alertness, working memory, focus, and executive function.

L-Tyrosine supports healthy glandular function and stress response because it helps with the synthesis of thyroid hormone and **epinephrine** (adrenalin).

Studies have found tyrosine to be useful for cold, fatigue, prolonged work, stress, sleep deprivation, and those suffering with hypothyroidism. Particularly studies within the military.^{xii}

The typical dose for N-Acetyl L-Tyrosine (NALT) is 300 – 500 mg per day. This dose can be taken all at once, or dosed throughout the day. Experiment to see how you respond during your day.

[Learn more about N-Acetyl L-Tyrosine](#)

NADH

NADH (Nicotinamide Adenine Dinucleotide + Hydrogen) boosts alertness, improves mental energy and elevates mood. NADH is an antioxidant **coenzyme** related to the B-Vitamin family.

This coenzyme is used in the formation of **ATP**, the energy source within the mitochondria of your cells. It's most highly concentrated in your heart and brain. Both power-hungry organs.

NADH seems to decline with age, and is associated with cell damage and accelerated cellular aging.

NADH also helps boost the production of **dopamine** and **norepinephrine**. This allows for greater mental performance including better memory, alertness and energy.

Dosing of NADH is 5 – 20 mg per day. NADH for nootropic benefit seems to be 10 mg.



[Learn more about NADH](#)

Nefiracetam

Nefiracetam is one of the newer nootropics in the **racetam family** of **cognitive** enhancers. Developed in Japan, nefiracetam is used to treat learning and memory deficit diseases.^{xiii}

Nefiracetam is structurally similar to **Aniracetam** but considered much more potent. This fat-soluble nootropic easily crosses the **blood-brain barrier**. It works in the **hippocampus** area of your brain to boost memory and recall.

Nefiracetam is used clinically to treat and prevent seizures, severe depression, and has shown neuroprotective qualities.

Dosing nefiracetam is based on body weight. Acceptable dosage levels according to limited reported user experience is 100 – 900 mg per day. Most nootropic users experience some benefit in the lower range.

[Learn more about Nefiracetam](#)

Nicotine



Nicotine molecules attach to *nicotinic **acetylcholine** receptors* in the brain. And seem to work by regulating other **receptor systems**. One obvious clue to how this works – nicotine tends to make you more alert. And has a calming effect.

The primary neurotransmitter that nicotine boosts is **dopamine**. Which may be the reason why it's so addictive. As a result, it can also help prevent some diseases.

Dozens of clinical studies have been published showing nicotine effective in treating Parkinson's, **ADHD**, Tourette's, schizophrenia, and other neurological disorders.

Jennifer Rusted, professor of experimental psychology at Sussex University in Britain says, "nicotine is the most reliable **cognitive** enhancer that we currently have".^{xiv}

Turns out the addictive quality of using tobacco isn't entirely caused by nicotine. But by the interplay with all the other compounds found in a cigarette.

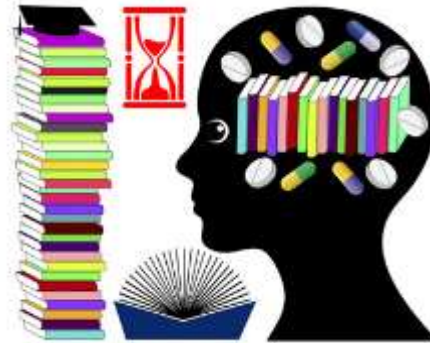
The key to using nicotine as a nootropic is NOT by smoking a cigarette. Use a nicotine patch or lozenge instead.

Recommended dosage of nicotine as a nootropic is 1 – 2 mg, preferably used **sublingually**.

[Learn more about nicotine](#)

Noopept

Noopept is a peptide-derived nootropic related to the **racetam family**. Much more potent than **piracetam** (up to 1000X), its mechanism of action in your brain is similar to other racetams.



Noopept seems to stimulate **dopamine**, **nicotinic** and **serotonin** receptors. It boosts **cognition**, memory, logical thinking, improves reflex, and improves mood. Noopept has also been shown to increase brain *Nerve Growth Factor*.

Dosage recommendations for Noopept are 10 – 30 mg per day. And is often stacked with a good choline source like **Alpha GPC** or **CDP Choline**.

[Learn more about Noopept](#)

Oat Straw

Oat Straw (*avena sativa*) comes from green oat grass. You may have heard the term “sowing your wild oats”. Oat Straw increases *luteinizing hormone* in your body, and is the basis for that saying. Luteinizing hormone stimulates *testosterone* production.

Oat Straw is a **MAO-B inhibitor** and increases dopamine levels in the brain. As a nootropic, Oat Straw can improve attention, **cognition**, concentration and focus. All benefits experienced when your dopamine and testosterone levels are optimized.



Oat Straw extract dosage is 800 – 1600 mg per day.

[Learn more about Oat Straw](#)

Oxiracetam

Oxiracetam is from the **racetam family** of nootropics. And up to 5-times more potent than **piracetam**. Oxiracetam stimulates **acetylcholine** use in the brain by working with the **AMPA** and **NDMA receptors**.

Oxiracetam can boost focus, memory, mental energy, recall, and improves fluidity of thinking. It's most often stacked with a **choline** supplement because it boosts the use of choline in your brain.

Oxiracetam can be paired with other nootropics in a stack. Recommended dosage is 750 – 1,500 mg per day, and preferably dosed throughout the day.

You should use Oxiracetam with a good choline source like **Alpha GPC** or **CDP Choline** to avoid fatigue or headache when using it.

[Learn more about Oxiracetam](#)

Phenibut

Phenibut was developed in the Soviet Union in the 1960's. Phenibut is a **GABA** agonist and primarily binds to the **GABA-B receptor**. GABA-A receptor GABA agonists include alcohol and **benzodiazepines**.

Phenibut can have a sedative effect, and has strong anti-anxiety qualities. It can be used to combat depression, improve mood, **cognitive** function and motivation.

A safe starting dose of Phenibut is 2 – 300 mg. Take it on an empty stomach and expect to feel it's full effect in 2 – 6 hours. Experienced Phenibut users will dose as high as 1.5 grams per day (NOT recommended when you're starting out).

[Learn more about Phenibut](#)

Phenylpiracetam

Phenylpiracetam (Carphedon) is a Russian derivative of **Piracetam**.^{xv} And estimated to be 30 – 60 times more potent than Piracetam. It was created by adding an extra molecule from the *phenyl* group.

Easily crossing the **blood-brain barrier**, Phenylpiracetam is a fast-acting nootropic. It helps improve memory, recall, learning capacity, concentration, motivation and mental energy. And provides a stimulant effect.

Phenylpiracetam also helps reduce motion sickness, boosts physical performance, is anti-anxiety, and improves tolerance to cold.

Dose Phenylpiracetam 100 mg twice per day. Tolerance is likely so it's best to cycle Phenylpiracetam. Use it when needed for a cognitive boost. Or try **cycling** it one week on and one week off.



[Learn more about Phenylpiracetam](#)

Picamilon



Picamilon (nicotinyl-γ-aminobutyric acid) is a combination of **niacin (Vitamin B₃)** and **GABA**. It was developed in the Soviet Union as an enhanced form of GABA that is capable of crossing the **blood-brain barrier**.

Once in your system, Picamilon separates into *niacin* and *GABA*. And produces a calming and blood vessel dilation effect.

Similar to **Phenibut**, Picamilon improves memory, concentration, motivation, focus, has strong anti-anxiety properties, and can lower blood pressure.

Start with the lowest possible dosage of Picamilon and see how you tolerate it. 50 – 300 mg per day is typical. Most nootropic users find somewhere between 50 – 100 mg. 2 to 3 times per day is optimal. It is water soluble and should be taken on an empty stomach for quicker action.

[Learn more about Picamilon](#)

Pine Bark Extract (Pycnogenol®)

Pine Bark Extract is a standardized extract of French maritime pine bark. **Pycnogenol** is a patented water-soluble pine bark extract containing 65-75% proanthocyanidins.

Pine Bark Extract helps boost *cerebral blood flow* by increasing nitric oxide which helps dilate blood vessels. And helps repair and maintain the health of blood vessel linings.



Pine Bark extract is one of the *most potent antioxidants discovered*. Scavenging *free radicals* to protect *neurons* and other brain cells from *oxidative damage*.

Proanthocyanidins are condensed tannins responsible for the astringent character (pucker factor) of fruits,

berries, beans and tea. Pine Bark is higher in these *bioflavonoids* than most other plant sources.

Pine Bark Extract is a potent *anti-inflammatory*, and *antioxidant*. And it's not just great for your brain. It's also great for skin health, DNA, lowering blood sugar levels, improving eye health, helps correct erectile dysfunction, calms PMS symptoms, tames asthma and hay fever, and symptoms of *ADHD*.

Dosing Pine Bark Extract or Pycnogenol as a nootropic is up to 100 mg 3-times per day.

[Learn more about Pine Bark Extract \(Pycnogenol®\)](#)

Piperine

Piperine is black pepper extract. And is used with other supplements for greater and faster absorption.

But most don't realize that Piperine is a nootropic in its own right. This compound has been shown to decrease anxiety, improve mood and boost memory.

Piperine taken with a supplement like **curcumin** will prevent the liver from breaking down the curcumin before absorption. Piperine elevates other supplement levels in your body which can be good in some case. And detrimental in others.



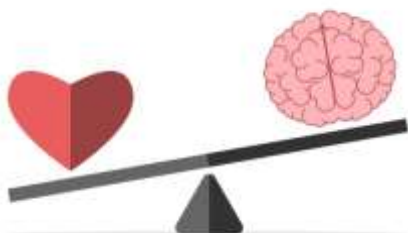
You'll often see **BioPerine®** added as a compound in some nootropic or supplement stacks. BioPerine® is a patented form of Piperine that is said to significantly enhance the bioavailability of various nutrients through increased absorption.

Dosage is typically 5 – 20 mg of Piperine.

[Learn more about Piperine](#)

Piracetam

Piracetam was developed by Romanian chemist, and the godfather of nootropics, **Dr. Corneliu E. Giurgea** in 1964. This is the first racetam ever developed.



Piracetam is a cyclic derivative of **GABA** but does not affect the GABA receptors in your brain.

Instead, Piracetam seems to influence the AMPA and NMDA receptors. This affects learning and memory processes in the brain.

Piracetam also affects the neurotransmitter **acetylcholine** by boosting ACh receptors into accepting or being more sensitive to acetylcholine.

As a nootropic, piracetam boosts focus, learning, and memory. Piracetam also acts as a neuroprotectant.^{xvi}

Dosing of Piracetam ranges from 1 – 4.8 grams per day. Dosed throughout the day. If it's your first time using Piracetam start at the lower end of the range and work your way up. If you're stacking with other racetams you'll likely use smaller quantities of Piracetam.

[Learn more about Piracetam](#)

Rhodiola Rosea

AMPK (adenosine monophosphate-activated protein kinase) is an enzyme found inside each of our cells and works as the body's master regulating switch. AMPK is reduced as we age. But it is possible to increase AMPK using compounds such as **Rhodiola Rosea**.

When AMPK is "switched on" it triggers the use of stored energy from fats, removes fats and sugars from the blood, boost mitochondria production, reduces inflammation, and takes out the cellular "garbage".^{xvii}

When AMPK is activated in brain cells it prevents diseases such as Alzheimer's and Parkinson's.

Rhodiola Rosea is a plant that grows at high altitudes and in cold regions of the world. It decreases depression and stress-related mood swings, reduces fatigue, stimulates energy and alertness, and boosts **cognition**.



Dosage of Rhodiola Rosea is from 150 – 200 mg per day.

[Learn more about Rhodiola Rosea](#)

Phenylalanine

Phenylalanine is an amino acid that easily crosses the **blood-brain barrier**. It is not produced by the body so must be obtained by food or in supplement form. Examples of natural sources of **Phenylalanine** are meat and milk products.

Phenylalanine is a **precursor**, or assists in producing the amino acid **tyrosine** in your brain. Tyrosine then helps in the formation and utilization of the neurotransmitters **dopamine**, **epinephrine**, **norepinephrine** and **melatonin**.

Using Phenylalanine as a **nootropic** helps fight chronic pain, improve mood and boost energy. It also helps in relief from anxiety, improves **focus** and boost motivation. DL-Phenylalanine is used to help combat **ADHD** and Parkinson's.

Phenylalanine dosage is 500 mg up to 3-times per day.

Caution should be observed if you're taking anti-depressants.

[Learn more about Phenylalanine](#)

Phosphatidylcholine (PC)

Phosphatidylcholine is a **phospholipid** with the highest concentration found in the brain and liver. Used as a nootropic supplement, **Phosphatidylcholine (PC)** helps build and repair cell membranes.

When phosphatidylcholine is used as a nootropic, it separates into **choline** and *sphingomyelin* in your brain. **Choline** is a precursor to the neurotransmitter **acetylcholine**. And **sphingomyelin** helps in the development and protection of **brain nerve cells**.



When blood levels of choline are low, phosphatidylcholine is cannibalized from cell walls to make acetylcholine. This eventually leads to nasty diseases like Alzheimer's, poor memory and recall, loss of focus and brain fog, and more.

To boost choline in your brain, you can supplement with phosphatidylcholine. As a nootropic supplement, dosing ranges from 1,200 mg – 5 grams per day. If you are new to neurohacking, start on the lower range of the scale and dose 2 or 3 times per day.

[Learn more about Phosphatidylcholine \(PC\)](#)

Phosphatidylserine (PS)

Phosphatidylserine (PS) is vital for the brain because the brain produces it. This **phospholipid** is found in all cells, but most highly concentrated in brain cell wall membranes.



Phosphatidylserine helps in the storage, release and activity of **neurotransmitters** and their **receptors**.

Phosphatidylserine production declines as we age. And the reason why supplementation of this nootropic is so critical.

Study after study shows supplementation of phosphatidylserine can boost **cognition**, focus, memory, and recall.^{xviii}

Phosphatidylserine (PS) is now derived from plant sources, such as soybean lecithin, or sunflower lecithin. Plant derived PS is equally effective and safer than that derived from animal brain sources.

Dosing phosphatidylserine (PS) is anywhere from 100 – 300 mg per day.

Learn more about Phosphatidylserine (PS)

PQQ

PQQ (pyrroloquinoline quinone) is an enzyme cofactor, and the only nutrient known to facilitate the growth of new mitochondria in your brain cells.

Researchers found PQQ supplementation can boost the production and release of **nerve growth factors** in cells that support creation of new **neurons** in the brain. And promotes **neuroplasticity** that helps neurons develop the connections needed for learning and developing memories.^{xix}

More studies support PQQ's ability to increase mitochondrial density, reduce inflammation and oxidative stress, and improve learning and memory. As an antioxidant, PQQ is thousands of times more potent than Vitamin C.

Without PQQ, mitochondria wear out and brain cells age faster. Supplementing with PQQ should give you a brain energy boost. And provide anti-aging benefits.

Dosing PQQ as a nootropic is typically 10 – 20 mg per day.



[Learn more about PQQ](#)

Pramiracetam

Pramiracetam is a **GABA**-like derivative of **piracetam**. It's said to be 5 – 30 times more potent than piracetam.

Pramiracetam is a fat-soluble nootropic and highly bio-available.

It is thought to increase **acetylcholine** receptors in the brain. This racetam improves memory and verbal recall.^{xx}

Because pramiracetam stimulates **choline** uptake in the brain it should be stacked with a good choline source like **Alpha GPC** or **CDP Choline**. And it's fat-soluble so needs to be taken with food or a good fat source like fish or coconut oil.

Optimal dosage of pramiracetam as a nootropic is 1,200 mg divided into 2 or 3 doses during the day.

[Learn more about Pramiracetam](#)

Pterostilbene

Pterostilbene is found in cranberries, blueberries and grapes. And is a compound similar to **Resveratrol**.



Pterostilbene is a very potent antioxidant, stimulates **Brain-Derived Neurotrophic Factor**, promotes **neuroplasticity**, is anti-anxiety, boosts **dopamine**, and helps **cognition**, learning and **memory**.

Pterostilbene works by modifying enzymes linked to glucose levels. It helps reduce blood sugar and cholesterol. Thus reducing oxidative stress and preventing heart attacks and stroke.

Pterostilbene is believed to be stronger than **Resveratrol** and has better **bio-availability**. Both compounds work in different ways in a human cell so are often stacked together.

Recommended dosage of Pterostilbene is 50 mg per day.

[Learn more about Pterostilbene](#)

Resveratrol

A *polyphenol antioxidant* found in the skin of grapes, **Resveratrol's** purpose is to protect the grape from microbial attacks, cold weather and UV radiation.

Studies have shown Resveratrol can also boost learning, memory and **cognitive** power in the hippocampus section of your brain. Resveratrol can also improve blood flow and boost brain health.^{xxi}



Researchers also discovered Resveratrol improves cell survival and **neurogenesis** in the hippocampus, boosting memory and learning.^{xxii}

Recommended nootropic dosage of *trans-resveratrol* is 20 – 250 mg per day.

[Learn more about Resveratrol](#)

SAM-e

SAM-e (S-Adenosyl Methionine) is a naturally occurring compound in your body. It is the amino acid *methionine* bound to an **ATP** molecule.

SAM-e helps the process of cell division and repair, and the generation of the neurotransmitters **dopamine**, **serotonin**, **norepinephrine** and **melatonin**. Which is why it's considered a potent nootropic.

SAM-e is used to boost mood, relieve depression, improve energy levels, and reduce symptoms of fibromyalgia.

The recommended dosage of SAM-e as a nootropic is 400 mg per day.

[Learn more about SAM-e](#)

St John's Wort

St John's Wort (*hypericum perforatum*) is a plant that has been traditionally used for mood disorders and wound healing. Today it's used mostly as a treatment for anxiety, depression and stress.

St John's Wort easily crosses the **blood-brain barrier**. And seems to work by preventing the **re-uptake** of **serotonin** in the brain.

A word of caution however. St John's Wort is a strong *CYP3A4* liver enzyme inducer. This enzyme is responsible for metabolizing psychoactive compounds in the liver. This translates to nullifying the effect of any other nootropics you may be taking.



Dosing St John's Wort is anywhere from 900 to 1,800 mg per day. But be careful of using it with any other nootropics or medications.

[Learn more about St. John's wort](#)

Sulbutiamine

Sulbutiamine (isobutyryl thiamine disulfide) is synthesized from **Vitamin B₁ (thiamine)**. It was first developed in Japan to treat beriberi – a Vitamin B₁ deficiency.

Superior to thiamine as a nootropic because Sulbutiamine easily crosses the **blood-brain barrier**.

As a nootropic, Sulbutiamine is taken to boost mood, memory and motivation.

A typical dose of Sulbutiamine is 4 – 600 mg per day. **Tolerance** has been reported by neurohackers, so it would be wise to **cycle** the use of this nootropic. Skip a couple of days every week.

[Learn more about Sulbutiamine](#)

Tryptophan

Tryptophan is an essential amino acid and precursor to serotonin, melatonin and niacin (Vitamin B₃) in your body.



Serotonin, the “happiness molecule” relies on an adequate supply of Tryptophan for synthesis. Low levels of serotonin in the brain are often due to an inadequate supply of Tryptophan.

Tryptophan is found in abundance in oats, bananas, dried prunes, milk, tuna, cheese, bread, chicken, turkey, peanuts and chocolate. But our bodies often have problems converting this Tryptophan to serotonin in our brain.

Adding L-Tryptophan to your **nootropic stack** can help you boost serotonin levels. As a **nootropic** supplement, L-Tryptophan is used to treat anxiety, **ADHD**, depression, insomnia, **memory** loss, pain and eating disorders.

[Learn more about Tryptophan](#)

Turmeric

Turmeric (*Curcuma longa*) is the anti-Alzheimer’s spice. Turmeric is one of the main spices in curries. In parts of India where curries are eaten most often, Alzheimer’s disease is extremely rare.

Turmeric is unique in the ability to reduce inflammation common to Parkinson's, Alzheimer's and brain tumors.



Researchers at the Department of Neurosurgery, University of South Florida College of Medicine in Tampa, FL found that the curcuminoids in turmeric help break apart the **plaque** that clogs the brains in Alzheimer's patients.^{xxiii}

Turmeric has a combination of curcuminoids, volatile oils and proteins that make it anti-bacterial, anti-cancer, anti-inflammatory, and anti-septic.

Some neurohackers maintain that turmeric or curcumin is the best nootropic. You can increase the bioavailability of turmeric by combining it with **Piperine** (black pepper extract) and a healthy fat like olive or coconut oil.

To witness the nootropic effects on mood and stress, dose Turmeric 2.5 – 4 grams per day.

Some concentrated extracts allow you to get the effects of Turmeric in smaller doses. *Curcuma Longa (root) extract* with 95% curcuminoids is dosed at 750 mg 3-times per day.

[Learn more about Turmeric](#)

Tyrosine

L-Tyrosine is an amino acid produced by Phenylalanine in your body. **L-Tyrosine** is directly involved in creating **dopamine**, **norepinephrine**, and **epinephrine** in your brain.

L-Tyrosine is also a precursor to thyroxin (the body's main thyroid hormone).

You get tyrosine from almonds, bananas, dairy products, eggs, lima beans, oats, poultry and wheat germ. Tyrosine hitchhikes on the back of amino acids like tryptophan to cross the blood-brain barrier to enter your brain.

N-Acetyl-L-Tyrosine (NALT) is a more bioavailable form of tyrosine when used as a nootropic.



Neurohackers report that L-Tyrosine and especially NALT improves motivation and focus as well as **amphetamines** like Adderall if you're dealing with **ADHD**.

L-Tyrosine also plays a role in controlling organs responsible for creating and regulating hormones in your body. Including your adrenal glands, pituitary gland and thyroid.

L-Tyrosine can sharpen memory, is anti-anxiety, boosts mood, and protects **brain nerve cells** from neurotoxins.

Typical dosage of L-Tyrosine is 500 mg – 2 grams per day. Start at the low end of the scale and work your way up as you evaluate the effects and benefits of L-Tyrosine in your body.

[Learn more about Tyrosine](#)

Uridine Monophosphate

Uridine Monophosphate (5'-uridylic acid) is a precursor to *Ribonucleic Acid (RNA)*. RNA provides instructions to your DNA to help

create memory by facilitating connections between brain neurons ([synapses](#)).^{xxiv}

RNA levels decrease as we age. Supplementing with Uridine as a nootropic is one of the ultimate anti-aging tools to improve memory function.



The monophosphate portion of uridine is the transporter that helps uridine move through your digestive tract unharmed. And delivers uridine across the [blood-brain barrier](#).

Uridine affects the synthesis of phosphatides in the brain which are critical to cellular membranes. When you increase the synaptic proteins in your brain, you boost the number of synapses. Improving various aspects of [cognition](#).

Uridine comes from eating broccoli, sugarcane, yeast, liver, and tomatoes.

Uridine supplementation as a nootropic uplifts and stabilizes mood, is anti-stress, helps Obsessive Compulsive Disorder, is anti-anxiety and helps modulate and normalize [dopamine](#) release.

Recommended dosage for you just starting out with uridine monophosphate as a nootropic is 150 – 250 mg twice per day. Take it with a good Vitamin B-Complex and a large dose of fish oil (i.e. 700 mg DHA + 300 mg EPA).

You can take uridine monophosphate [sublingually](#) for a more pronounced effect. Adding 300 mg of [Alpha GPC](#) or [CDP Choline](#) is also recommended.

[Learn more Uridine Monophosphate](#)

Vinpocetine

Vinpocetine enhances **brain blood flow** by dilating blood vessels. And reducing blood viscosity or thickness.



Vinpocetine is derived from the periwinkle plant. It easily crosses the **blood-brain barrier**. And helps improve brain blood supply, boosts oxygen and glucose use by the brain, maintains healthy levels of **neurotransmitters**, and promotes better concentration, focus, and memory.

Dosing Vinpocetine as a nootropic is 10 mg up to three times per day.

[Learn more about Vinpocetine](#)

Vitamin B₁ (Thiamine)

Sulbutiamine is a derivative of **Vitamin B₁ (Thiamine)**. Vitamin B₁ is needed to produce cellular energy (**ATP**) from the foods you eat. It's also needed for the synthesis of DNA and RNA.

Vitamin B₁ is found in lentils, whole grains, pork, red meat, yeast, nuts, sunflower seeds, peas, milk, cauliflower and spinach.

Vitamin B₁ is water soluble and is stored in your body for only 14 days. If you don't get enough B₁ you'll experience irritability, confusion and memory problems. A severe deficiency can manifest itself as beriberi, pain, heart problems, or even paralysis.

Recommended daily dosage of Vitamin B₁ is only 1.4 mg per day. You'll experience a nootropic benefit with Vitamin B₁ at higher doses of 50 – 100 mg per day.

[Learn more about Vitamin B₁ \(Thiamine\)](#)

Vitamin B₃ (Niacin)

Vitamin B₃ (Niacin or nicotinic acid) is used in the synthesis of Coenzyme A which helps to form Acetyl-CoA. Acetyl-CoA joins with [choline](#) to form [acetylcholine](#).

Vitamin B₃ also supports over 200 other chemical reactions in your body including [cellular energy production](#) and fatty acid synthesis.

Food sources of Vitamin B₃ include beef, poultry, fish, peanuts and lentils.

Vitamin B₃ (Niacin) is the only B vitamin that can be synthesized in the liver from the amino acid [tryptophan](#).

Niacin causes blood vessels to dilate or open up which is especially noticeable near the skin. Taking regular niacin as a nootropic supplement can cause a tingling sensation or red flushing of the skin.

1,000 mg of “extended-release” niacin taken 3-times per day can improve memory, and correct some senility problems. Dosing 50 – 1,000 mg at bedtime taken at bedtime may help you sleep better.

[Learn more about Vitamin B₃ \(Niacin\)](#)



Vitamin B₅ (Pantothenic Acid)

You need **Vitamin B₅ (Pantothenic Acid)** to synthesize coenzyme-A for the production of the neurotransmitter [acetylcholine](#).



Your body cannot make Vitamin B₅ on its own so it needs to come from food or a supplement. Vitamin B₅ is found in nearly every food type. But much of the Vitamin B₅ in Western processed food has been removed during processing.

You may not realize the full benefit of a nootropic stack containing **Alpha GPC**, **CDP-Choline**, **Acetyl-L-Carnitine** or any of the **racetams** (that boost **choline** in the brain) without adding Vitamin B₅.

Vitamin B₅ also helps support fatty acid synthesis and **cellular energy production** in your body.

Using Vitamin B₅ as a nootropic can boost focus, memory, learning, and reduce brain fog.

Recommended dosing of Vitamin B₅ is 5 mg per day. But neurohackers suggest a higher dosage like a one-to-two ratio with a choline supplement. For example, 250 mg of Vitamin B₅ with 500 mg of CDP Choline.

[Learn more about Vitamin B₅ \(Pantothenic Acid\)](#)

Vitamin B₆ (Pyridoxine)

Vitamin B₆ (Pyridoxine) as a nootropic helps your body make **serotonin**, **norepinephrine** and **melatonin**.

Vitamin B₆ helps control homocysteine in your blood. Homocysteine is the amino acid associated with heart disease. Your body also requires Vitamin B₆ to absorb Vitamin B₁₂ and to make red blood cells and cells for your immune system.



Symptoms of low Vitamin B₆ are associated with irritability, depression, nervousness, difficulty concentrating and memory loss.

Dietary sources of Vitamin B₆ include poultry, tuna, salmon, shrimp, dairy products, lentils, beans, spinach, carrots, bananas, brown rice and sunflower seeds.

Recommended nootropic dosage of Vitamin B₆ is up to 100 mg per day. Doses exceeding 200 mg can cause neurological disorders and loss of feeling in your legs.

[Learn more about Vitamin B₆ \(Pyridoxine\)](#)

Vitamin B₈ (Inositol)

Vitamin B₈ (Inositol) as a nootropic can boost [serotonin](#) levels which results in feelings of calm, heightened mental energy, and easy thought flow.

But it turns out Vitamin B₈ is not a true “vitamin” because your body can produce small quantities of this compound on its own.

Vitamin B₈ supports messenger signals throughout the body, including all the messenger signals [between neurons in your brain](#).

Vitamin B₈ (Inositol) is also used to control the symptoms of Obsessive Compulsive Disorder and panic attacks.

Best food sources of Inositol are citrus fruits, green leafy vegetables, liver, brown rice and cereals.

As a nootropic, Vitamin B₈ (Inositol) dosage is from 500 – 3,000 mg. per day.

Learn more about **Vitamin B₈ (Inositol)**

Vitamin B₉ (Folate)

Vitamin B₉ (Folate) as a nootropic helps your brain make **dopamine**, **epinephrine**, **norepinephrine** and **serotonin**.

As a **coenzyme**, Folate participates in one-carbon transfers in the synthesis of DNA and RNA. And converts homocysteine to methionine which is used in the synthesis of **S-Adenosyl-methionine (SAME)**.

Folate is involved in gene expression, amino acid synthesis, and myelin synthesis and repair.

Green leafy vegetables, or '*foliage*' are rich sources of folate. And how '*folate*' got its name. You can also get folate from citrus fruit juice, legumes, fortified foods (more on this controversy in the extended article), and liver.

Many neurohackers, including doctors and other health professionals confuse **folate** with **folic acid**. They are NOT the same.



In the extended article, we explore the differences between *folate* and *folic acid*. And how *Vitamin B₉ (Folate)* is critical for the fully optimized brain.

As a nootropic, Vitamin B₉ (Folate) dosage is 400 mcg. per day.

[Learn more about Vitamin B₉ \(Folate\)](#)

Vitamin B₁₂ (Cobalamin)

Vitamin B₁₂ (Cobalamin) deficiency is common among Western adults.^{xxv} Vitamin B₁₂ plays a key role in the efficient conversion of carbohydrates to glucose – your cell's source of fuel. It also helps your body to convert fatty acids into energy.



Brain fog and poor memory are two key warning signs your deficient in Vitamin B₁₂. Other warning signs include fatigue, lack of energy, muscle weakness, mood swings, depression, dementia and Alzheimer's.

Vitamin B₁₂ is the largest vitamin we know of so it's not as easily absorbed as others. As you get older the body loses the ability to transport Vitamin B₁₂ in the cells in your large intestine where it's pulled into your bloodstream.

The older you get the more difficult it is for you to get ANY B₁₂ into your body.

So the older you get the more likely you'll need to supplement with Vitamin B₁₂.

B₁₂ in its natural form is only available through animal food sources including seafood, beef, chicken, pork, milk and eggs.

To get an adequate supply of Vitamin B₁₂ as you get older is really only available through supplementation.

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Even though B₁₂ is water soluble, it doesn't exit your body as quickly as other water-soluble supplements. It's stored in your liver, kidneys and other body tissues. This means a deficiency may not show up for a number of years. But by then it may be too late and irreversible brain damage can potentially result.

The best way to dose Vitamin B₁₂ (Cobalamin) as a nootropic is sublingually (under the tongue), or a B₁₂ shot. The first way is much less expensive and considerably less painful.

Higher quality Vitamin B₁₂ comes as ***methycobalamin*** or ***adenosylcobalamin*** which are the forms of B₁₂ naturally occurring in your body. When looking for a B12 supplement or B-Complex, choose the one that contains ***methycobalamin*** for much better absorption and use by your body.

The recommended dosage for Vitamin B₁₂ deficiency is 2,000 mcg daily of ***methycobalamin*** for a week, then 1,000 mcg doses of B₁₂ once per week for a month. Then your maintenance dose is 1,000 mcg monthly.^{xxvi}

[Learn more about Vitamin B₁₂ \(Cobalamin\)](#)

Vitamin D

Vitamin D as a nootropic is critical for the synthesis of **GABA**, **glutamate** and **glutamine**, and **dopamine** in your brain.

Vitamin D is involved in *gene expression*, regulation of *neurotrophic factors*, *neuroplasticity*, and brain development early in life. All in *areas of the brain associated with depression*. And the neuroplasticity needed for memory formation and retrieval.

Vitamin D protects your brain from **DNA** damage through prevention of telomere shortening and inhibition of telomerase activity. And prevents oxidative damage to DNA.

Vitamin D₃ is the **fat-soluble** steroid hormone form of Vitamin D. The “*sunshine vitamin*” is considered essential. Your skin synthesizes Vitamin D₃ from ultraviolet-B (UVB) sunlight.



As a neurohacker, you should be aware that you are likely deficient in this essential vitamin. *Vitamin D deficiency (hypovitaminosis D)* is an undeclared worldwide pandemic affecting nearly *50% of the population on this planet*.

The preferred method for getting adequate Vitamin D is from UVB sunlight on exposed skin.

But all kinds of things can interfere with getting enough Vitamin D from sunlight. Fall and Winter in both hemispheres, cloud cover, smog, skin color, sunscreen, and too much clothing are all factors.

And most of us spend so much time indoors, to get its benefits you should take Vitamin D₃ as a supplement.

Recommended Vitamin D₃ dosage is 4,000 IU's per day.

[Learn more about Vitamin D](#)

Zinc

Zinc is an *essential* trace element absolutely required for optimal brain health and **cognition**.

Zinc is required for memory formation.
When more zinc is available in neurons, neurotransmitters move more efficiently and stay in play longer.

*Zinc helps boost **BDNF** which is needed for **long-term potentiation** and the formation of **memory**.* A deficiency in this mineral results in poor memory.

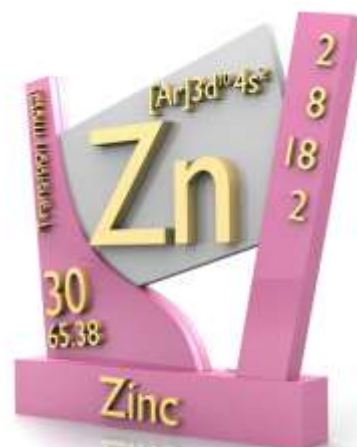
It is integral to the activity of at least 100 enzymes. And zinc helps lower **oxidative stress** which protects brain cells and **cerebral blood flow**. It is part of protein synthesis needed to make neurotransmitters. And it's involved in **DNA**_repair, synthesis and cell division.

Zinc deficiency is common even in our Western society because we often don't get enough from food. If you're vegan or vegetarian, you are particularly susceptible.

Zinc levels are low in those with depression. And the lower the zinc level, the more severe the depression.

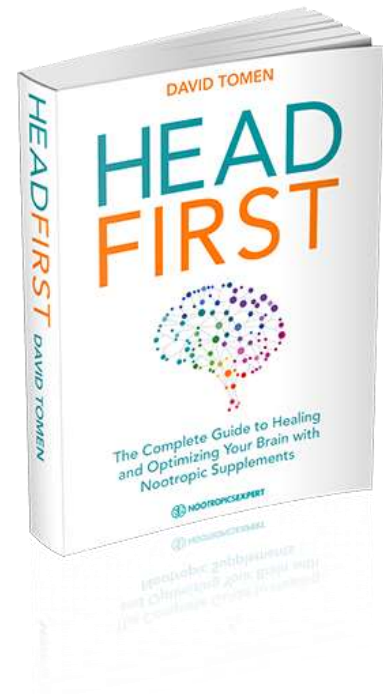
Recommended zinc dosage is 30 mg daily, balanced with 2 mg of copper.

[Learn more about Zinc](#)



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